

Dubbo Health Services Redevelopment Stage 4A, B and C

HEALTH INFRASTRUCTURE

SSD Report

Electrical , ICT and Security Services

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Dubbo Hospital Redevelopment

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Executive Summary

This SSD report describes the Electrical, Communications (ICT) and Security services design proposed for the new Stages 4 redevelopment at the Dubbo Base Hospital Redevelopment.

Stage 4 represents the continuation of the overall redevelopment of Dubbo Hospital and follows the works being carried out under Stage 3A and 3C. Therefore to gain a coordinated overview of both Stage 3 and 4 it is important to reference the Stage 3A and 3C documents.

Stage 4 is a new 3 storey building plus roof plant room which will be constructed to replace the existing “S” block, day surgery, medical imaging department, emergency department and front of house.

Stage 4 construction will be carried out in 3 separate sub stages (Stage 4A, Stage 4B and Stage4C). Stage 4C will also be carried out in two phases (Stage4C - phase 1 and Stage 4C - phase 2).

The demolition of these existing buildings and the construction of a new staged building are located in the middle of the existing hospital site and as such will affect the operation of a number of existing electrical and ICT services which pass through the footprint of the proposed work.

Therefore a number of services diversions will need to be carried out as each stage progresses to ensure that these services are maintained and do not affect the operation of a fully functional hospital.

This report shall be read in-conjunction with the architectural and other engineering services design reports.

Due to the additional power requirements for Stage 4 redevelopment an additional Essential Energy substation shall be provided for connection to their existing high voltage 11kV network.

1. Introduction

1.1 Project Scope Stage 4 Only

The DHS Redevelopment Stage 4 project scope is described as follows:

- Stage 4 – Site preparation works
 - Demolition of George Hatch and Existing Nurses Administration
 - **Demolition of Existing Surgical Ward ('S' Block)**
 - New Construction – Temporary Corridor Bypass Link
 - New Construction – 1 x permanent corridor bypass link south
- A new 3-storey clinical building comprising:
 - Ground Level
 - Medical Imaging
 - Emergency Department, including Short Stay Unit
 - A refurbished and expanded Main Entry
 - Level 1
 - Renal Dialysis Unit
 - Ambulatory Care Services
 - Level 2
 - 20 bed CCU/ Cardiovascular/ Stroke Unit
 - 12 bed ICU
 - Cardiovascular Suite
 - Level 3 – Plant Area
- Other associated works
 - Expansion of on grade car parking facilities and improved access and wayfinding.
 - Dedicated ambulance access off Myall Street
 - Amendments to the Cobbora Road roundabout to facilitate entry to the Hospital
 - Demolition of Playmates/Doctors Accommodation
 - Demolition of external component of existing Ambulatory Care Unit
 - Landscaping including tree removal and other public domain works
 - Upgrades of related engineering services infrastructure supporting Stages 4.
 - Refurbishment of the two ICU ensuites within the medical inpatient ward (G-ward).

1.3 Overview

This report covers the SSD for Stages 4A, 4B and 4C which form part of the overall refurbishment for Stages 3 and 4 at the Dubbo Base Hospital redevelopment.

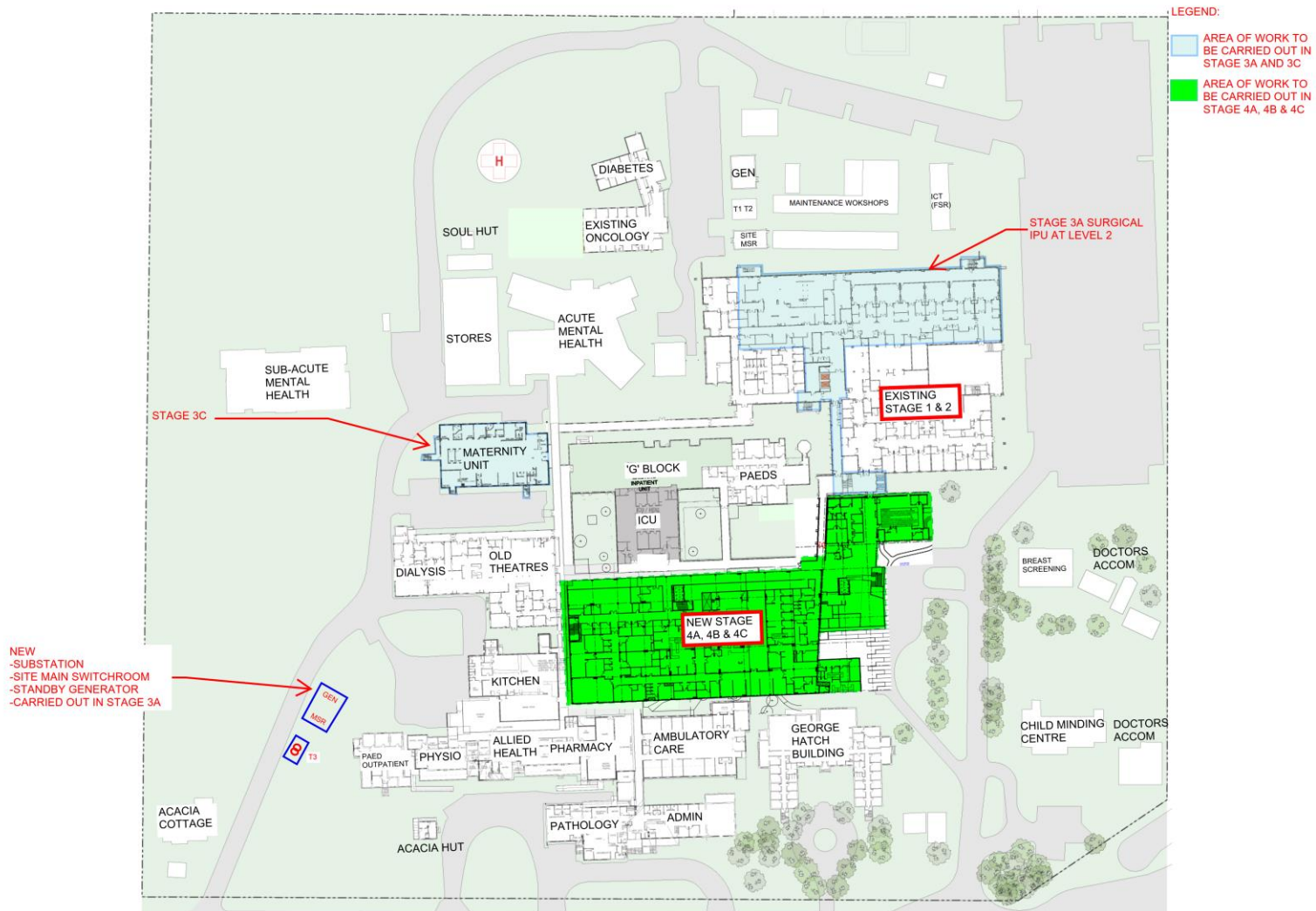


Figure 1 : Overall Dubbo Base Hospital site plan showing the location for Stage 4A, 4B and 4C work.

The Stage 4A works is broken up into the following areas:

Location	Area (m ²)
Ground Floor (Medical Imaging)	1609
(First part of new emergency department)	551
Level 1 (Renal Dialysis)	660
(Administration/Staff Areas)	376
(First part of Ambulatory Care)	423
(First part of Medical Day Procedures)	589
(First part of main circulation corridor)	317
Level 2 (CCU)	965
(Administration/Staff Areas)	766
(First part of ICU)	385
(First part of the Cath Lab)	176
(First part of main circulation corridor)	156
Level 3 (First part of the roof plant room)	1196

The Stage 4B works is broken up into the following areas:

Location	Area (m ²)
Ground Floor (second part of new emergency department)	1204
Level 1 (Second part of Ambulatory Care)	386
(Second part of Medical Day Procedures)	486
(Second part of main circulation corridor)	250
Level 2 (Second part of ICU)	550
(Second part of the Cath Lab)	390
(Second part of main circulation corridor)	170
Level 3 (Second part of the roof plant room)	377

The Stage 4C works is broken up into the following areas:

Location	Area (m ²)
Ground Floor (Staff areas associated with the emergency department)	247
(New Front of House)	1114
Level 1 (Circulation space over main entry)	420
Level 2 (Circulation space over main entry)	420

In addition to the above floor areas where the majority of the work will be carried out, there will also be related work carried out in other areas as listed below:-

- Additional circuit breakers to be added to the existing site main switchboard (MCB-C) to provide power for Stage 4.
- New sub main cables run from the existing site main switchboard (MSB-C) to level 1 building main distribution board for Stage 4.
- New sub main cables run from the new Stage 4 building main distribution board to all the lighting and power distribution boards, lifts, mechanical services and hydraulic services panels, (all mechanical and hydraulic services panels provided by the respective trade)
- New fibre optic and copper backbone cables run from the existing hospital's file server room (FSR) to the new Stage 4 building distributor located on level 1 in Stage 4A.
- New fibre optic and copper backbone cables run from the new Stage 4 building distributor to the Stage 4 floor distributors located on Ground Floor, Level 1, Level 2 and the roof plant room.

Stage 4A, B and C follow the earlier construction work associated with both Stage 3A (the new surgical IPU located above the existing birthing and maternity IPU) and Stage 3C (the refurbishment of the existing "old maternity building"). Therefore as the electrical and ICT site infrastructure works have common routing/connection points across both Stage 3 and 4 it is important that the services documentation for Stage 3A and 3C is referred to in addition to this report.